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merly recognized as pseudo-lichenes. They may be observed on nearly every tree trunk, on fences, rocks, pavements, etc.; in fact, anywhere where the lower forms of algae (especially *Protococcus viridis*) can exist. Examination of these algae will find them usually associated with fungal hyphae, sometimes forming extended thin thallus-like layers. The structure formerly recognized as *Lepra viridis* is an excellent example. Though apothecia are never found, yet I am inclined to believe that in so-called *Lepra* we find the beginnings of a future lichen. At least there are many lichens which show an inferior structure as compared with *Collema*, and for that reason are perhaps nearer the prototype. As an example we may mention *Pyrenula*. *Verrucaria* perhaps represents a degenerate type rather than a lower type of an ascending series, as is indicated by a rudimentary thalline structure associated with rudimentary or degenerate apothecia, spores and paraphyses. Whether a given lichen represents a low type of an ascending series or a degenerate higher form is in many cases difficult to decide; also the question as to the relative phylogenetic ages of various lichen groups. There is perhaps little doubt that basidiolichenes have had a much shorter phylogenetic history than ascolichenes. There are many problems in lichenology which must be left to the conscientious morphologists and physiologists to solve. In fact, we know so little of the life history of individual lichens that the time for final specific arrangement has not yet come. We, however, know sufficient of lichens as a whole to give them a proper position in the vegetable kingdom which is in reality the first step toward establishing a lichen system. Their proper position I have attempted to indicate in this paper.

New Species of Fungi.

BY CHAS. H. PECK.

LEPIOTA FULVODISCA. Pileus thin, convex or nearly plane, obtuse or umbonate, viscid when moist, white, with the disk or umbo fulvous or tawny-brown; lamellae narrow, close, free, white; stem slender, flexuous, viscid, hollow, white or whitish, the base abruptly bulbous, the annulus thin, membranous, pure white; spores ovate-elliptical, .0003 to .0004 in. long, .00016 to .0002 in. broad, usu-

ally containing a shining nucleus and furnished with a slight apiculus at one end.

Pileus 1 to 1.5 in. broad; stem 2 to 3 in. long, 1 to 1.5 line thick.

Plant fragile, growing among fallen leaves in woods. Pasadena, California. January. Prof. A. J. McClatchie.

From *L. illinita* Fr. this species is separated by its tawny disk of the pileus, its membranous annulus, the bulbous base of the stem and the different shape of the spores.

CLITOCYBE PUSILLA. Pileus at first hemispherical or convex, then nearly plane, obtuse, sometimes with a very small umbo, dry, pruinose, grayish, flesh thin, whitish; lamellae narrow, close, adnate or decurrent, white; stem short, solid, pruinose, grayish; spores subglobose or very broadly elliptical, .00016 to .0002 in. long.

Pileus 3 to 8 lines broad; stem about 6 lines long, scarcely 1 line thick.

Densely gregarious or subcaespitose. On manure. Pasadena. February. McClatchie.

Apparently belonging to the tribe Disciformes and related to *C. Brasadolae* Schulz, but an exceedingly small plant for that tribe.

COLLYBIA ALBOGRISEA. Pileus fleshy, thin, convex or nearly plane, often somewhat irregular on the margin, glabrous, whitish or grayish, flesh white; lamellae broad, distant, adnate, white or whitish, the interspaces often venose; stem nearly equal, hollow, sometimes twisted, whitish or grayish, the lower part covered with a dense whitish, grayish or yellowish tomentum, the upper part naked or merely white-pruinose; spores broadly elliptical, .0002 to .00024 in. long, .00016 broad, generally containing a single shining nucleus.

Pileus about 1 in. broad; stem 1.5 to 2 in. long, 1 to 2 lines thick.

Plant often caespitose and then the pileus irregular from mutual pressure. Among fallen leaves. Pasadena. January. McClatchie.

The species belongs to the tribe Vestipedes.

MYCENA ELEGANTULA. Pileus membranous, conical or campanulate, sulcate-striate, brown or purplish-brown; lamellae distant, adnate with a decurrent tooth, whitish or pallid with the edge purplish-brown, the interspaces (in the dried specimens) venose or transversely wrinkled; stem slender, hollow, glabrous, sometimes

with a loose grayish fibrillose tomentum at the base; spores oblong-elliptical, .00035 to .0005 in. long, .00016 to .0002 broad, usually containing one or two small nuclei.

Pileus, 4 to 10 lines broad; stem 1 to 2 in. long, .5 a line thick.

Gregarious or caespitose. Among fallen leaves under trees. Pasadena. December. McClatchie.

This plant may be distinguished from the closely related *M. atromarginata* Fr. by its smaller size and the purplish tint to the edge of the lamellae, and from *M. purpureofusca* Pk. by its differently shaped, longer spores.

OMPHALIA SEMIVESTIPES. Pileus very thin, deeply convex or subcampanulate, glabrous, grayish-brown in the dried state, paler when fresh; lamellae rather broad, distant, arcuate, decurrent, white or whitish; stem hollow, white or whitish, the upper half glabrous, the lower half clothed with a white mycelioid tomentum; spores elliptical, .0002 to .00024 in. long, .00012 to .00016 broad.

Pileus 6 to 12 lines broad; stem about 1 in. long, 1 to 2 lines thick.

Growing on much decayed wood. Newfoundland. May. Rev. A. C. Waghorne.

This plant is apparently related to such species as *O. setipes* Fr. and *O. grisea* Fr. and belongs to the tribe Mycenariae. It is easily recognized by the peculiar character of the stem. In the dried examples the upper glabrous part of the stem is shriveled and longitudinally striate, but the lower tomentose part is plump and even as in the fresh plant.

HYGROPHORUS ELEGANTULUS. Pileus convex or nearly plane, glabrous, viscid, grayish-yellow or slightly tawny, flesh white; lamellae distant, slightly decurrent, white; stem equal, solid, slightly floccose-squamulose at the top, elsewhere glabrous, glutinous, white or whitish, sometimes abruptly pointed at the base; spores elliptical, .0004 in. long, .0002 to .00024 broad.

Pileus 1 to 2 in. broad; stem 2 to 3 in. long, 3 to 4 lines thick.

Woods. Maryland. November. T. Taylor.

The species belongs to the tribe Limacium, and is related to *H. discoideus* Fr., from which it may be separated by its solid stem and larger spores.

ENTOLOMA FERRUGINANS. Pileus fleshy, convex, obtuse or umbonate, often irregular, hygrophanous, glabrous, shining, dark fuliginous or broccoli-brown, flesh whitish, fibrous and colored at

the surface; lamellae 4 to 7 lines broad, adnexed, easily splitting transversely, grayish-salmon, becoming clay-color; stem solid, glabrous, yellowish or cream-color, blunt at the base or sometimes attenuated and radicating; spores subglobose, irregular or angular, .0003 to .0004 in. long.

Pileus 2 to 6 in. broad; stems 3 to 4 in. long, 4 to 8 lines or more in thickness.

Under oak trees. Pasadena. February. McClatchie.

This plant is related to *E. rhodopolium*, but is separated from it by its darker color and solid stem. According to Prof. McClatchie, the fresh plants have a strong odor resembling that of ferric chloride, and chemical tests showed the presence of iron. It is pronounced edible by him.

LEPTONIA EDULIS. Pileus thin, convex or centrally depressed, with or without an umbo, velvety, dark-gray; lamellae rather broad, subventricose, adnexed; moderately close, at first whitish or light drab, becoming flesh-color; stem slender, hollow, colored like the pileus, often with an abundant white mycelioid tomentum at the base; spores subglobose, angular, apiculate at one end, .0003 to .0004 in. long, containing a single large nucleus.

Pileus 6 to 18 lines broad; stem 12 to 18 lines long, .5 to 1 line thick.

Among grass and weeds. Pasadena. January.

According to Prof. McClatchie, this plant when fresh has a nutty flavor and is edible. The velvety appearance of the pileus has disappeared from the dried specimens. In some, the margin of the pileus is striate, but in the fresh plant the margin is said to be even.

ECCILIA NIGRICANS. Pileus thin, convex, umbilicate or centrally depressed, subzonate, unpolished, grayish-black; lamellae broad, distant, decurrent, light-drab or brownish, becoming tinged with flesh-color; stem short, hollow, grayish-black, commonly with an abundant white mycelium; spores angular, .0004 in. long, nearly as broad, containing a single large nucleus.

Pileus 6 to 18 lines broad; stem about 1 in. long, .5 to 1 line thick.

Grassy ground. Pasadena. January.

Prof. McClatchie's notes say that this plant has the odor and flavor of butternuts and that it is delicious when cooked. Also that when fresh the pileus is tomentose and the margin even, but these characters are not clearly shown in the dried specimens.

PHOLIOTA ANOMALA. Pileus at first hemispherical or subconical, then convex, glabrous, hygrophanous, broccoli-brown when moist, pale-yellow or cream-color when dry; lamellae adnate or slightly decurrent, subarcuate, pale becoming brownish-ferruginous, often white on the edge; stem cavernous or hollow with irregular transverse partitions, sometimes containing a cottony tomentum, whitish, with a slight evanescent annulus; spores elliptical, .0003 to .0004 in. long, .00016 to .0002 broad.

Pileus 8 to 18 lines broad; stem 1.5 to 2.5 in. long, 1 to 3 lines thick.

Sticks and leaves lying on the ground. Pasadena. January. McClatchie.

The species belongs to the tribe Truncigenae, section Hygrophanae. It is well marked by its fugacious annulus, subdecurrent lamellae and peculiar cavernous stem.

HEBELOMA FOEDATUM. Pileus fleshy, convex becoming plane or centrally depressed, glabrous, very viscid or glutinous, reddish cinnamon, flesh yellowish-white; lamellae subventricose, emarginate with a decurrent tooth, cinnamon-color, becoming mummy-brown; stem solid, equal or slightly thickened at the base, fibrillose, paler than the pileus; spores broadly elliptical, .00024 to .0003 in. long, .00016 to .0002 broad.

Pileus 1.5 to 3 in. broad; stem 1.5 to 2.5 in. long, 2 to 4 lines thick.

Streets of Pasadena. December. McClatchie.

The species is apparently related to *H. firmum*, *H. testaceum* and *H. glutinosum*, from all of which it is separated by its small spores. Its viscid pileus causes dirt to adhere to it in such quantity as to give the plant a very defiled, unattractive appearance.

FLAMMULA ANOMALA. Pileus deeply umbilicate or infundibuliform, often irregular, glabrous, whitish; lamellae narrow, close, decurrent, pale-ferruginous; stem short, irregular, whitish; spores globose, brownish-ferruginous, .00024 in. broad.

Pileus about 1 in. broad; stem 6 to 12 lines long.

Plant commonly caespitose. Ground. Trexlertown, Pennsylvania. October. Dr. William Herbst.

A whitish umbilicate pileus is unusual among species of *Flammula*. This plant appears to belong to the tribe Gymnotae.

TUBARIA PALLESCENS. Pileus fleshy but thin, convex or nearly plane, sometimes slightly depressed in the center, glabrous, hygrophanous, brick-red when moist, yellowish or cream color when

dry; lamellae broad, adnate or slightly decurrent, tawny-buff, becoming brownish-ferruginous; stem slender, hollow, yellowish, with a white mycelium at the base; spores elliptical, .0003 in. long, .00016 broad.

Pileus 5 to 10 lines broad; stem 12 to 18 lines long, .5 to 1 line thick.

Sticks and leaves under trees. Pasadena. January. McClatchie.

When young, slight vestiges of a veil are visible, connecting the incurved margin of the pileus with the stem.

PLUTEOLUS LUTEUS. Pileus thin, at first subovate, then convex or subcampanulate, glabrous, viscid, slightly striate on the margin, yellow; lamellae numerous, close, free or but slightly adnexed, yellowish becoming ferruginous; stem slender, hollow, slightly thickened toward the base, striate at the top and there sprinkled with mealy particles, yellowish; spores elliptical, .0004 to .0005 in. long, .00024 to .0003 broad.

Pileus 6 to 12 lines broad; stem 1.5 to 2.5 in. long, 1 to 2 lines thick. Plant very fragile, gregarious. Under trees. Pasadena. December. McClatchie.

The yellow color and viscid pileus are prominent characters of this species. In some of the dried specimens the lamellae appear free, in others slightly adnexed, but because of the viscid pileus I have referred the plant to the genus *Pluteolus*.

CORTINARIUS VIRGATUS. Pileus thick, fleshy, hemispherical or convex, obtuse or subumbonate, slightly viscid, ochraceous tinged with olive-buff, conspicuously virgate with reddish fibrils, flesh dingy-white; lamellae subdistant, adnexed, at first subcinnamon, then ochraceous-russet; stem short, stout, solid, enlarged and fibrillose at the base, pale-ochraceous; spores subglobose or broadly elliptical, .00024 to .0003 in. long, .0002 to .00024 broad.

Pileus 3 to 4 in. broad; stems about 2 in. long, 8 to 12 lines thick.

Under oak trees. Pasadena. February. McClatchie.

This species is well marked by its stout habit and by the reddish fibrils of the pileus.

AGARICUS CALIFORNICUS. Pileus at first subconical, becoming convex, minutely silky or fibrillose, whitish, tinged with purple or brownish-purple on the disk, flesh whitish; lamellae close, free, pink becoming purplish, then blackish-brown; stem rather long, solid or stuffed, equal or tapering upward, distinctly and rather abruptly narrowed above the entire externally silky annulus, pallid

or brownish; spores broadly elliptical, .0002 to .00025 in. long, .00016 to .0002 broad.

Pileus 1 to 3 in. broad; stem 1.5 to 3 in. long, 2 to 4 lines thick.

Under oak trees. Pasadena. January. McClatchie.

This fungus is similar in size, shape and habitat to *A. hemorroidarius*, but it is unlike that species in color, in the adornment of the pileus and in its color not changing where bruised or broken.

STROPHARIA BILAMELLATA. Pileus fleshy, convex, even, whitish or yellowish, flesh pure white; lamellae close, adnate, purplish-brown when mature; stem short, solid, white, with a well-developed pure white annulus which is striately lamellate on the upper surface; spores elliptical, purplish brown, .0004 in. long, .0002 to .00024 broad.

Pileus 1 to 2 in. broad; stem about 1 in. long, 3 to 4 lines thick.

Streets of Pasadena. January. McClatchie.

This fungus is remarkable for the lamellated upper surface of the rather thick membranous annulus. These lamellae are uneven on the edge and in some cases they appear to extend upward on the stem till they meet the true lamellae. The plant is said by its discoverer to be edible. The color of the young lamellae is not shown by the examples.

HYPHOLOMA LONGIPES. Pileus thin, campanulate, even or obscurely striate on the margin, fibrillose becoming glabrous, hygrophanous, yellowish-brown when moist, brown or isabelline-brown when dry, the margin appendiculate with the very white floccose fugacious veil; lamellae narrow, close, adnate, white or whitish, becoming nearly black, often whitish on the edge; stem slender, long, hollow, striate at the top, white, with a white mycelioid tomentum at the base; spores elliptical, .0005 in. long, .0003 broad.

Pileus 1 to 1.5 in. broad; stem 2 to 5 in. long, 1 to 2.5 lines thick.

Plant fragile, growing among fallen leaves in very wet weather. Pasadena. September. McClatchie.

The disk of the pileus is so thin and the stem so completely hollow to the apex that in the dried specimens there is a depression or umbilicus in the center of the pileus.

PANAEOLUS INTERMEDIUS. Pileus campanulate or convex, even, glabrous, moist or hygrophanous, grayish-brown; lamellae ascending or subarcuate, subdistant, adnate, black when mature; stem slender, often elongated, hollow, grayish-brown, white-pruinose at the top; spores oblong-elliptical, .0005 to .0006 in. long, .00025 to .0003 broad.

Pileus 6 to 12 lines broad; stem 2 to 4 in. long, .5 to 1 line thick.

Rich soil along gutters or in cañons. Pasadena. January. McClatchie.

The margin of the pileus does not extend beyond the lamellae, and this character with the slender stem suggests the genus *Psathyrella*, but because of the absence of striae on the pileus it seems best to refer the plant to the genus *Panaeolus*.

PANAEOLUS DIGRESSUS. Pileus hemispherical or convex, glabrous, bay-red; lamellae very broad, plane, distant, adnate, purplish black with a white edge; stem short, floccose-fibrillose toward the base, striate at the apex, hollow, a little paler than the pileus; spores broadly elliptical, .0005 to .0006 in long, .00035 to .0004 broad.

Pileus 4 to 6 lines broad; stem about 1 in. long, 1 line thick. On dung. Pasadena. July. McClatchie.

This plant also diverges from the generic character in its lamellae extending quite to the margin of the pileus, and in its unpolished stem.

COPRINUS CALYPTRATUS. Pileus when mature adorned with a few grayish floccose scales and crowned with a persistent stellately split membranous dingy-yellow or subtawny calyptra, radiate striate to the disk, grayish-flocculent along the ridges of the striae, blackish; lamellae free, dark lead color becoming black; stem equal, hollow, white, becoming blackish in drying except at the base, neither annulate nor distinctly volvate; spores elliptical, black, .0006 to .0008 in. long, .00045 to .0005 broad.

Pileus about 2 in. broad; stem 3 to 4 in. long, 2 to 3 lines thick. Open cultivated ground. Rockport, Kansas. August. E. Bartholomew.

This species is well marked by the persistent membranous calyptra that adheres to the summit of the pileus. Its margin is split into four to six broad rays. The change of color in the stem is similar to that ascribed to the stem of *C. sterquilinus* Fr., but our plant differs from that in its calyptra and in the absence of an an-

nulus and volva at the base of the stem. Only mature specimens were seen, consequently the characters of the young plant remain unknown and the description to that extent is defective.

COPRINUS JONESII. Pileus submembranous, campanulate becoming broadly convex or expanded and split or revolute on the margin, very blunt or truncate at the apex when young, everywhere covered with tawny-gray or pale-cervine floccose scales which wholly or partly disappear with age revealing the striate surface beneath; lamellae crowded, linear, free, at first white or whitish, becoming black; stem equal or slightly tapering upward, minutely floccose, hollow, white; spores black, broadly elliptical, .0003 to .00035 in. long, .00025 broad, with an apiculus at one end.

Pileus 1 to 2 in. broad; stem 2 to 3 in. long, 2 to 3 lines thick.

Plant fragile, sometimes caespitose. In a cellar. Vermont. April. Prof. L. R. Jones.

The species is closely related to *C. fimetarius*, of which it might easily be considered a variety, but it is easily distinguished by the truncate apex of the young pileus, the differently colored scales and the smaller spores. *C. soboliferus* Fr. has the pileus truncated at the apex, but it is a very different species.

COPRINUS APICULATUS. Pileus membranous, campanulate or deeply convex, acute or apiculate, furfuraceous, plicate-striate to the disk, grayish; lamellae few, subdistant, reaching the stem, black; stem filiform, glabrous, white; spores elliptical, black, .0003 in. long, .00016 broad.

Pileus about 3 lines broad; stem 1 to 1.5 in. long, scarcely half a line thick. Lewiston, Pennsylvania. Mrs. E. B. Noyes.

BOLETINUS BOREALIS. Pileus fleshy, convex, obtuse or subumbonate, brownish yellow, obscurely and somewhat reticulately streaked with reddish-brown lines; pores large, angular, unequal, slightly decurrent, brownish-yellow; stem short, equal or slightly tapering upward, brownish-yellow with a whitish mycelioid tomentum at the base; spores oblong, .0004 to .0005 in. long .00016 to .0002 broad.

Pileus 1 to 2 in. broad; stem about 1 in. long.

Sandy soil. Capstan Island, Labrador. October. Waghorne.

The markings of the pileus appear as if due to the drying of a glutinous substance. The radiating lamellae and the transverse partitions of the interspaces are very plainly shown. Described from two dried specimens.

BOLETUS INFLEXUS. Pileus convex, glabrous, viscid, yellow, often red or reddish on the disk, the margin thin, inflexed, concealing the marginal tubes, flesh whitish, not changing color where wounded; tubes rather long, adnate, yellowish, becoming dingy-yellow with age, the mouths small, dotted with reddish glandules; stem rather slender, exannulate, solid, viscid, dotted with livid-yellow glandules; spores yellowish, .0004 to .0005 in. long, .00016 to .0002 broad.

Pileus about 1 in. broad; stem about 2 in. long, 2 to 4 lines thick.

Open woods. Trexlertown. September. Herbst.

This *Boletus* belongs to the tribe Viscipelles. It is remarkable for and easily recognized by the inflexed margin of the pileus, which imitates to some extent the appendiculate veil of *Boletus versipellis*. It sometimes grows in tufts. The paper in which fresh specimens were wrapped was stained yellow. *Boletus Braunii* Bres. has an inflexed margin, but that is a much larger plant with a yellowish-brown pileus, a fibrillose stem and much smaller spores.

POLYPORUS ANCEPS. Effuso-reflexed or resupinate, inseparable from the matrix, firm, subcorky but flexible, white; pileus narrow, about 6 lines broad, laterally elongated or confluent, minutely downy, sometimes rugosely pitted; pores minute, subrotund, commonly 2 to 3 lines long, the dissepiments obtuse; mycelium white, permeating the bark and wood.

Dead trunk of hemlock, *Tsuga Canadensis*. Stony Brook, Massachusetts. October and November. Prof. E. A. Burt.

The plants are commonly resupinate, but sometimes reflexed, forming a narrow pileus about half an inch broad but extending laterally for several inches. They are suggestive of the first year's growth of *P. cennatus* Fr., but they do not revive the next year, and they have a different habitat. Though differing somewhat in texture they are apparently related to such species as *P. semisupinus* and *P. semipileatus*, and with them they serve to connect the genus *Polyporus* with the genus *Poria*.

SPARASSIS HERBSTII.—Plants much branched, forming tufts 4 to 5 in. high and 5 to 6 in. broad, whitish, inclining to creamy-yellow, tough, moist, the branches numerous, thin, flattened, concrescent, dilated above and spatulate or fan-shaped, often somewhat longitudinally curved or wavy, mostly uniformly colored, rarely with a few indistinct, nearly concolorous, transverse zones

near the broad entire apices; spores subglobose or broadly elliptical, .0002 to .00025 in. long, .00016 to .0002 broad.

Trexlerstown. August. Herbst.

The species is evidently closely allied to *S. spathulata* Schw., but differs especially in its paler color, with no rufescent hues, in its much more-branching habit and in the absence of any distinct zones.

BATTARREA ATTENUATA. Exoperidium unknown; endoperidium 2 in. or more in breadth, the basal part hard, thick, even and concave beneath, convex above and somewhat coarsely reticulate by the bounding walls of broad shallow pits; stem 8 to 10 in. long, gradually attenuated toward the base, hard, almost woody, solid, rough except at the top with rather coarse spreading or reflexed scales, brown externally, rusty-brown within; spores globose, ferruginous, .0003 in. broad; threads of the capillitium destitute of spiral thickenings.

Plants commonly growing in tufts of 3 to 5 individuals.

Dry sandy soil. Nevada. Collected by C. W. Irish; communicated by Dr. Thomas Taylor.

The single dried specimen from which, with notes kindly communicated by the collector, the above description was derived, was past maturity and destitute of any volva or exoperidium. The upper part of the endoperidium, which is apparently membranous, had nearly all disappeared, and but a mere remnant of the spores and capillitium remained. It is very unsatisfactory to attempt the description of a species from such imperfect data, yet the characters seen are so peculiar and distinct that I have been willing to strain a point in order to make this remarkable plant known. It does not agree rigidly with the characters ascribed to the genus *Battarrea*, differing apparently in the solid stem, the absence of spiral thickenings in the capillitium threads and in the coarsely pitted subreticulate hymenial substratum, so that it might easily be taken as the type of a distinct genus.

The dried specimen has a strong, unpleasant odor, indicating its relationship to the Phalloideae. From the notes of Mr. Irish we learn that the long stem, which is about half an inch thick at the base and one and a half at the top, is almost wholly buried in the soil, and that the plants appear above the surface only in seasons after heavy snow falls, whose gradual melting has moistened the earth deeply.

TYLOSTOMA SEMISULCATUM. Peridium subglobose, usually a little longer than broad, 6 to 8 lines broad, 9 lines long, glabrous above, ferruginous-tomentose on the lower half; ostiolum entire, stem equal, about 2 in. long, even and glabrous or but slightly furfuraceous on the upper part, the lower part longitudinally sulcate, whitish; spores ferruginous, globose, .00016 to .0002 in. broad; threads of the capillitium colorless, not septate.

Sandy soil. Nevada. Collected by C. W. Irish; communicated by T. Taylor.

This species is separated from *T. mammosum* Fr. by its peridium, which is tomentose on the lower half and not depressed, and by its stem, which is distinctly furrowed in its lower half.

LYCOPERDON BELLII. Peridium about 2 in. broad, subglobose, sessile, grayish or yellowish-brown, exterior peridium continuous, adorned with numerous persistent hard angular irregular or substellate warts which are smaller toward the base, separable at maturity from the inner peridium and falling away in flakes or patches; the inner peridium thinner, paler, glabrous; capillitium composed of long slender interwoven, slightly colored and occasionally branched filaments, a little broader than the diameter of the spores; spores globose, olive-brown, .00024 to .00028 in. broad.

Rocky ground. Digges Island, Hudson's Bay. August. Collected by R. Bell; communicated by Prof. J. Macoun.

This puff-ball is peculiar in its continuous but warty exterior peridium, which is less friable than that of *L. separans*. The peridium appears to rupture irregularly, as in *Calvatia*. It is also well marked by the dark olive-brown spore mass.

EXCIPULINA OBSCURA. Perithecia cupulate, $\frac{1}{4}$ to $\frac{1}{2}$ line broad, sessile, black, the margin at first incurved, then erect, thin; hymenium subgelatinous; spores subfiliform, curved, plurinucleate or obscurely pluriseptate, hyaline, .0012 to .0018 in. long, .00016 broad, supported on short sporophores.

Bark of hemlock trees, *Tsuga Canadensis*. Newfoundland. Waghorne.

MELASMIA IMITANS. Perithecia hypophyllous, membranous, variable in size and shape, commonly subelliptical or oblong, somewhat confluent in nerve-following lines, rugosely uneven, black, opening irregularly; spores subcylindrical, straight or nearly so, colorless, sometimes obscurely plurinucleate, .0008 to .0012 in. long, .00016 to .0002 broad, oozing out and forming pallid globular or irregular masses or short thick tendrils.

Lower surface of living fronds of *Ficris aquilina*. California. Prof. M. A. Howe.

This fungus imitates *Phyllachora pteridis* in habitat and general appearance, and might easily be supposed to be the conidial state of it. The lines of the perithecia are more narrow and less prominent. The masses of discharged spores are rather large and very numerous and partly conceal the black perithecia beneath them.

CAEOMA ABERRANS. Pustules suborbicular, slightly elevated, .5 to 1 line broad, at first covered by a whitish membrane which finally disappears revealing the mass of orange-yellow spores; spores subglobose or elliptical, smooth or nearly so, .0007 to .0009 in. long.

Bark of living alder. Newfoundland. May. Waghorne.

This fungus is peculiar in its habitat. The spores do not easily separate from each other, but possibly this is due in some measure to immaturity.

ASPERGILLUS SUBGRISEUS. Grayish; sterile hyphae creeping; fertile erect, continuous, simple, .0003 in. thick, terminating above in an inflated subglobose vesicle .0012 to .0016 in. broad; sterigmata none or obsolete; spores globose, .00016 in. broad.

On *Corticium amorphum*. Newfoundland. Waghorne.

This species is separated from the related *A. griseus* by its larger spores, continuous fertile hyphae and by the absence of distinct sterigmata.

LEPTOGLOSSUM LATUM. Club 3 to 6 lines long, nearly or quite as broad, soft when moist, rather fragile when dry, compressed and somewhat irregular, black; stem about as long as the club, black; asci clavate-cylindrical, .0045 to .005 in. long, about .0005 broad, 8-spored; spores crowded in the ascus, oblong or cylindrical, straight or slightly curved, continuous, obtuse, colorless, .001 to .0016 in. long, .0002 to .00024 broad; paraphyses colored, thickened at the top and sometimes recurved.

Sandy soil. Labrador. September. Waghorne.

A species very peculiar in its broad compressed club. The colored paraphyses are conspicuous under the microscope. They project slightly above the surface of the receptacle and give it a soft, almost velvety appearance.

VALSA BREVIS. Pustules numerous, rather prominent, perithecia 10 to 20 or more in a pustule, nestling in the inner bark; ostiola even, black, barely emerging from and dotting or oblitera-

ting the orbicular or elliptical erumpent subpulverulent disk; asci .0008 to .001 in. long; spores allantoid .00024 to .0003 in. long.

Bark of balsam fir, *Abies balsamea*. Labrador. Waghorne.

This fungus is allied to but differs from *Valsa Friesii* in its larger pustules, more numerous perithecia and shorter asci and spores. The color of the disk is grayish or grayish-green.

HYGROPHORUS NIGRIDIVS. Pileus fleshy, convex, obtuse or subumbonate, glabrous, grayish-brown or black-brown, often a little darker in the center, flesh white; lamellae distant, decurrent, white; stem rather slender, solid, brownish, white at the top; spores elliptical, .0004 to .0005 in. long, .00024 to .0003 broad.

Pileus 1 to 2 in. broad; stem 1 to 2 in. long, 2 to 4 lines thick.

Gregarious or rarely two or three united at the base. Pine and fir tree woods. Prince Edwards Island. October and November. J. MacSwain.

This fungus differs from *H. caprinus* Fr. in its smaller size, glabrous pileus and larger spores. A description of it was published in the Country Gentleman of November 29, 1894, but one is here given that it may be more readily accessible to mycologists.

In many of the foregoing descriptions I have been obliged to give the colors indicated by the dried specimens. It is not likely therefore that they will in all cases agree rigidly with the colors of the fresh plant.

Hypericum boreale (Britton) and related Species.

BY EUGENE P. BICKNELL.

At York Harbor, Maine, *Hypericum Canadense* L. abounds, presenting itself in varying forms; *Hypericum majus* (Gray) Britton frequently grows with it, either strongly typical or with aberrant tendency; *Hypericum mutilum* L. is common also.

More characteristic of the region, however, than any of these is a small species, which grows in abundance in open situations, about the muddy borders of pools or in moist sandy soil, and shows some interesting lines of variation. Some fragmentary specimens, collected in 1888, were pronounced by Dr. Britton to